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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/599,229	06/22/2000	Eli Shagam	EMC-99-167	7778

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EXAMINER

VU, THONG H

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 02/11/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/599,229

Applicant(s)

SHAGAM ET AL.

Examiner

Thong H Vu

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

1. Claims 1-17 are pending.

Response to Arguments

2. Applicant's arguments filed 11/14/03 have been fully considered but they are not persuasive to overcome the prior art.

A.Applicant argues the prior art does not teach How the TTL is done and what the TTL is reduced.

Examiner points out the prior art did teach the processing to reduce TTL art [Nagami, col 1 lines 20-40; col 28 lines 46-61;col 29 lines 1-15;57-62]. It is clearly by provide a method for improving the datagram transfer efficiency [Nagami, reduce TTL, col 16 lines 51-59].

B.Applicant argues the prior art does not detail the maximum length of TTL is reduced or after.

Examiner points out the prior art taught the processing rewrites a header of datagram to reduce TTL base on the maximum length of the LAN [Nagami col 16 lines 51-65].

C.Applicant argues the prior art does not detail the TTL is modified to limit the message packet to a maximum path length.

Examiner points out the prior art taught a modified internal configuration, by modifying the configuration which changed the Scheduler, Connection ID analysis unit to identify the next hop address [Nagami col 17 lines 17-44; col 23 lines 28-50,]. It was clearly that the Connection ID analysis unit calculated the number of hop addresses

represented the path or route length of the message (or maximum path length) transmitted over system which connected the local LAN to remote (external) LAN.

D. Applicant argues the prior art (i.e.: Yener) does not detail modifying a field of a message packet in order to dictate the maximum length for the message packet.

Examiner points out the prior art discloses a reception unit changes the data link frame (i.e.: a message packet) into datagram suitable for handling at the network layer [Nagami, col 1 lines 20-40]. It was clearly the prior provides the technique of change or modifying a frame or field of message to improve the routing process. Nagami also taught the connection identifier analyst unit has a modified internal configuration [Nagami col 21 lines 10-21, col 22 lines 27-38]. By changing the internal configuration of datagram or the next hop address field of message which resulted to a maximum or minimum path or route.

Thus, the rejection is sustained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-17 are rejected under 35 U.S.C. § 103 as being unpatentable over Nagami et al [Nagami 5,822,319] in view of Yener et al [Combinatorial Design of Congestion-Free Networks]

4. As per claim 1, Nagami discloses a firewall (i.e.: router) for transferring message packets from an external network to a local area network [Nagami col 1 lines 5-10], at least one of the message packets including a time to live field including a time to live value [col 1 lines 20-40], the firewall comprising:

A. a message receiver configured to receive the at least one of the message packets from the external network [reception unit 11, Nagami Fig 4];

B. a message processor [datagram processing unit 22, Nagami Fig 4] configured to process the at least one message packet to provide, in the Time-to-live field, a time to live value selected to be related to a maximum length for message packets transferred over the local area network [time-to-live, maximum frame length of LAN, Nagami col 16 lines 51-60];

C. a message transmitter configured to transmit the at least one message packet as processed by the message processor over the local area network [transmission unit 13, Nagami Fig 4].

However Nagami did not detail maximum length as maximum path length

A skilled artisan would have motivation to improve the TTL for message over network and found Yener et al teaching. Yener taught a virtual network using combinatorial block designs with maximum route length [Yener abstract, pp 5-22]

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the virtual network using the maximum route length as taught by Yener into the Nagami's apparatus in order to modify the maximum frame length. Doing so would provide congestion-free network.

5. As per claim 2, Nagami-Yener disclose the firewall selectively transfers message packets from the external network to the local area network [Ethernet LAN, Nagami col 15 lines 22-30].

6. As per claim 3, Nagami-Yener disclose the selection is made for a respective message packet based on whether a source for the respective message packet in the external network is authorized (registered, Nagami col 15 lines 36-58, col 23 lines 44-54, col 25 lines 50-64, col 28 lines 46-61) to transmit a message packet to a destination in the local area network.

7. As per claim 4, Nagami-Yener disclose transferring message packets from the local area network to the external network, at least one of the message packets including a time to live field including a time to live value,

A. the message receiver being further configured to receive the at least one of the message packets from the local area network [reception unit 11 Nagami Fig 4, col 14 lines 14-28, col 25 lines 1-25];

B. the message processor being further configured to process the at least one of the message packets received from the local area network to provide, in the time to live field, a predetermined arbitrary value [time-to-live, maximum frame length of LAN, Nagami col 16 lines 51-60] [maximum route length Yener pp 5-22]; and

C . the message transmitter being further configured to transmit the at least one of the message packets as processed by the message processor over the external network [transmission unit 13, Nagami Fig 4].

8. As per claim 5, Nagami-Yener disclose firewall selectively transfers message packets from the local area network to the external network [Nagami col 1 lines 5-10].

9. As per claim 6, Nagami-Yener disclose the selection is made for a respective message packet based on whether a source for the respective message packet in the local area network is authorized (registered Nagami col 15 lines 36-58,col 23 lines 44-54,col 25 lines 50-64, col 28 lines 46-61) to transmit a message packet to a destination in the external network.

10. As per claim 7, Nagami-Yener disclose a device for generating and transmitting at least one message packet over network, the at least one message packet including a time to live field including a time to live value, the device comprising:

A. a message generator configured to generate the at least one message packet and provide, in the time to live field, a time to live value selected to be related to a maximum path length for message packets transferred over the network [maximum route length, Yener pp 5-22]; and

B. a message transmitter configured to transmit the at least one message packet as generated by the message generator over the network [transmission unit 13, Nagami Fig 4].

11. Claims 8-13 contain the similar limitations set forth of apparatus claims 1-6, respectively. Therefore, claims 8-13 are rejected for the similar rationale set forth in claims 1-6.

12. As per claim 14, Nagami-Yener disclose a method of generating and transmitting at least one message packet over network, the at least one message packet including a time to live field including a time to live value, the device comprising:

A. generating the at least one message packet and provide, in the time to live field, a time to live value selected to be related to a maximum path length for message packets transferred over the network [maximum route length, Yener pp 5-22]; and

B. transmitting the at least one message packet as generated by the message generator over the network [transmission unit 13, Nagami Fig 4].

13. As per claim 15, Nagami-Yener disclose a computer-readable medium having encoded thereon a message processor module configured to enable the computer process the at least one message packet to provide, in the time to live field, a time to live value selected to be related to a maximum path length for message packets transferred over the local area network [maximum route length, Yener pp 5-22].

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14. Claim 17 contains the similar limitations set forth of method claim 15. Therefore, claim 17 is rejected for the similar rationale set forth in claim 15.

15. As per claim 16, Nagami-Yener disclose transferring message packets from the local area network to the external network, at least one of the message packets including a time to live field including a time to live value, the message processor module being further configured to process the at least one of the message packets received from the local area network to provide, in the time to live field, a predetermined arbitrary value [maximum route length, Yener pp 5-22].

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thong Vu, whose telephone number is (703)-305-4643. The examiner can normally be reached on Monday-Thursday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey, can be reached at (703) 305-9705.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9700.

Any response to this action should be mailed to: Commissioner of Patent and Trademarks, Washington, D.C. 20231 or faxed to :

After Final (703) 746-7238
Official: (703) 746-7239
Non-Official (703) 746-7240

Hand-delivered responses should be brought to Crystal Park 11,2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Thong Vu
Patent Examiner
Art Unit 2142



JACK B. HARVEY
SUPERVISORY PATENT EXAMINER